

# Connect Power Supplies in Series or Parallel

Two or more isolated channels of one power supply or multiple power supplies can be connected to provide higher voltage or current.

**Note:** Only the isolated channels can be connected in series or parallel.

For **DP831A**, any two of the three channels can be connected in series. CH1 and CH2 or CH3 can be connected in parallel but CH2 and CH3 cannot be connected in parallel. For **DP832A/DP832**, CH1 and CH2 or CH3 can be connected in series or parallel but CH2 and CH3 cannot be connected in series or parallel.

## 1 Connect power supplies in series to provide higher voltage

The simplest method to create higher voltage is to connect the power supplies in series, set each supply to output the same current and each supply should have the same current limit. The sum of the power supplies output voltage will be applied to the DUT.

**Note:** Make sure that the channels work in CV (constant voltage) mode. If one of the channels works in CC (constant current) mode, the other channels will enter unregulated state in which the output is not predictable.

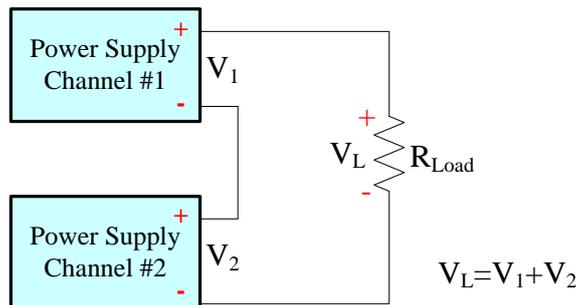


Figure 1 Two channels connected in series to provide higher voltage

## 2 Connect power supplies in parallel to provide higher current

The simplest method to create higher current is to connect the power supplies in parallel. The total output current is the sum of the output currents of the individual power supplies. You can set the output of each power supply separately.

The channels may work in CV or CC mode based on the load in actual application.

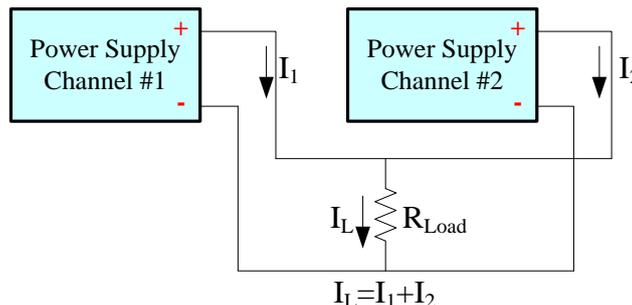


Figure 2 Two channels connected in parallel to provide higher current